U.S. Fish & Wildlife Service

Proposed Dual Jetty System at Oregon Inlet on North Carolina's Outer Banks

Issue

The Manteo (Shallowbag) Bay Project was authorized by Congress in 1970. The Corps of Engineers was directed to deepen the navigation channel through Oregon Inlet on the Outer Banks of North Carolina (Dare County) from 14 to 20 feet and maintain that channel with a dual jetty system. The jetties would require a complex sand bypassing system to mitigate the disruption of natural sand movement from one side of the inlet to the other. The project goal is to stabilize the inlet that moves naturally in response to dynamic coastal processes. The north jetty would be within the Cape Hatteras National Seashore (CHNS) and the south jetty would be within Pea Island National Wildlife Refuge (PINWR).

Status

In September 2001 the Wilmington District, U.S. Army Corps of Engineers released a third supplement to the original Final Environmental Impact Statement of 1979. The document included a new design for the dual jetty system, a sand management plan, project economics, and a proposal for environmental monitoring. The project purpose was changed from enabling larger vessels to catch more fish to enhancement of safe, reliable navigation through the inlet. Department of the Interior (DOI) comments since 1979 have reiterated a position that the jetty alternative should be rejected in favor of a dredging alternative. Due to the potential environmental impacts of the jetties, DOI may refer the project to the Council on Environmental Quality. The National Marine Fisheries Service also opposed the jetties alternative and recommended that an adequate channel be maintained by dredging. In light of overfishing in the area, resource agencies have questioned the need for such a large increase in channel depth, a major justification for the jetty system.

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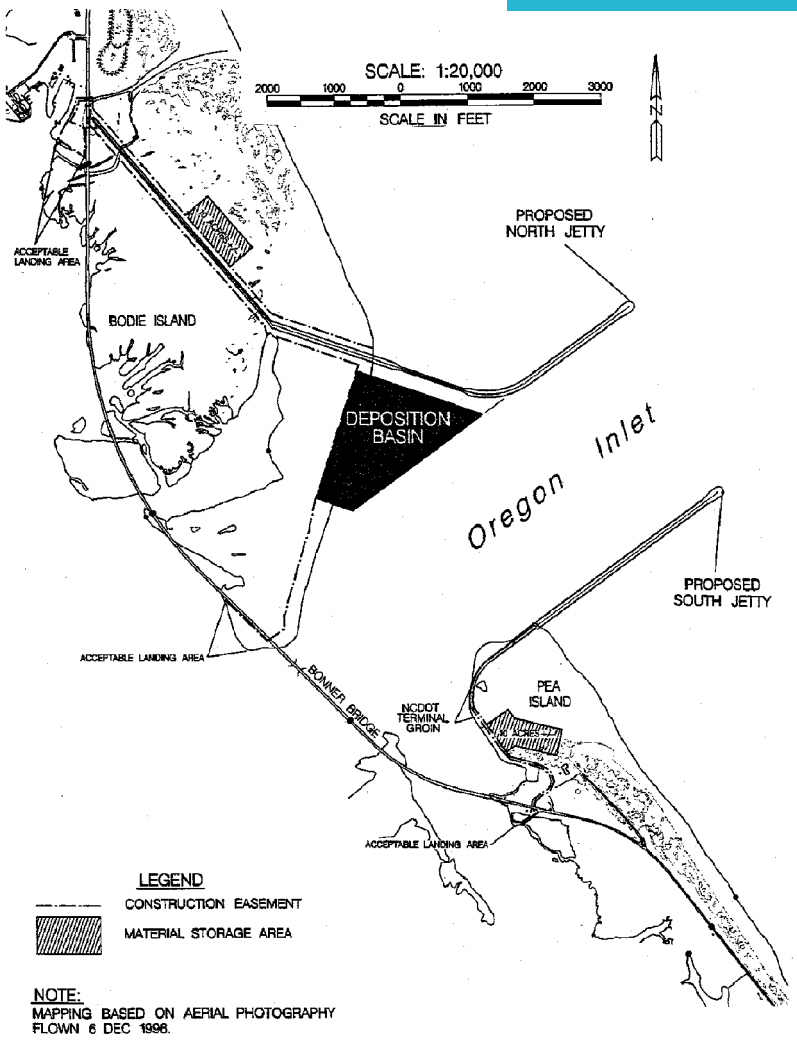
Aerial photograph of Oregon Inlet in 1996 looking north from Pea Island National Wildlife Refuge to the Cape Hatteras National Seashore on Bodie Island.

The Corps' estimated construction cost for the jetty system is $91.758 million dollars, with annual maintenance costs increasing from $8.4 million with the current channel to $12.9 million with the proposed channel and jetties. Two academic economists reviewed the Corps' recent benefit-cost analysis and determined that project costs over 50 years would exceed project benefits, i.e., the project had a benefit-cost ratio of less than one. These reports were provided to the Wilmington Corps District.

Background

The project area is a complex and dynamic inlet-barrier island ecosystem. The barrier islands serve as an important pathway for migrating birds and the inlet is a vital passageway for fish between the ocean and estuaries. Over the course of a year approximately 500 vertebrate species may use or pass through the project area. In recent years, the federally listed piping plover has nested on sandy flats adjacent to the inlet and critical habitat for overwintering piping plovers was designated at the inlet in July 2001. Sea turtles nest on area beaches. The unspoiled beaches are an important destination for tourists.



All parties acknowledge that the exact responses of this inlet-barrier island ecosystem to the project cannot be accurately predicted. The Service is concerned that the jetties would severely disrupt the natural hydrology and sediment distribution within the project area. In 1982 the Service's Southeastern Regional Director determined that the jetties would not be compatible with the purposes for which PINWR was established. The National Park Service has determined that the project may impair the resources of the CHNS. The sand bypassing plan requires that sand trapped by the jetties be transferred to area beaches. The Corps would assume responsibility for any jetty-induced beach erosion for six miles north and south of the inlet. The sand disposal operation would result in highly artificial beach conditions and disposal areas would resemble construction zones during bypassing operations. The jetties would eliminate sediment inputs to Pamlico Sound and reduce the area of important habitats (e.g., tidal marshes, tidal mudflats, sea grass beds) that depend on sediment passing through the inlet to counteract natural erosion.

There is a serious unresolved issue regarding the extent to which the larvae of marine fishes that must be carried by natural currents through the inlet to estuarine nursery areas would be blocked by the jetties. The management authority of the Service at PINWR would be subordinated to demands for the operation of the jetties and sand bypassing system. Increased erosion and island overwash resulting from the jetties may adversely impact waterfowl impoundments on refuge.

Wilmington District
U.S. Army Corps of Engineers

Distinguished coastal geologists outside the Corps have identified significant uncertainties regarding the Corps' ability (from both the engineering and financial perspectives) to maintain the natural functions and unique habitats of the inlet-barrier island ecosystem. There may not be an engineering fix for every unexpected, adverse environmental consequence produced by the dual jetty system. The natural movement of the Outer Banks barrier island system in response to a rising sea level or the natural creation of a new inlet that could cause the closure of Oregon Inlet are natural processes beyond the control of the Corps. If it were possible for the Corps to develop an engineering solution to a given environmental impact, there can never be an assurance that the solution would be funded.

Recommendation

Current and foreseeable fisheries stocks, access to which is the principal justification for the jetties, do not justify the increased access for larger vessels that would require the proposed 20-foot channel. Therefore, the Service maintains that a safe, reliable navigation channel for sustainable fish harvests can be maintained by dredging. Since the authorizing legislation directed a specific channel depth and construction of the jetties, the Corps is obligated to pursue the jetty alternative. The Service should pursue a strategy for Congressional deauthorization of the specified channel increase to 20 feet in depth and construction of the jetties. The 1970 legislation should be replaced with a mandate for the Corps to develop a range of alternatives to ensure safe, reliable navigation through Oregon Inlet that fully considers fisheries resources and the unique environmental values provided by lands administered by the DOI.

For more information contact

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